







# Intelligent Transportation Systems



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# Intelligent Transportation Systems

-  The application of technology to build a responsive transportation system that will effectively and efficiently move goods and people within the Fresno-Clovis Region.
-  1995 - National ITS Plan was published.
-  1998 - Congress allocated \$1.2 billion for ITS related programs.
-  2001 - The San Joaquin Valley Intelligent Transportation System Strategic Deployment Plan was published, identifying the Fresno-Clovis Regional ITS Project and Fresno-Clovis area Signal Coordination as priority projects for Fresno County.

# Intelligent Transportation Systems

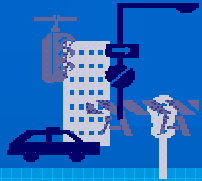
## San Joaquin Valley Regional ITS Plan

*“The Intelligent Transportation Vision for San Joaquin Valley is to enhance the quality of life, mobility, and the environment through coordination, communication and the integration of ITS technologies into the valley’s transportation systems”*

*San Joaquin Valley ITS Strategic Deployment Plan, 2001*

# Intelligent Transportation Systems

## ITS Program History!






-  Phase 1 – 1999/2001      Blackstone Corridor Constructed.  
(124 count fiber trunk line with 6 strands at each intersection)
-  Phase 2 – 2001/2003      Traffic Operations Center Operational  
Conduit & and Infrastructure Built  
for Herndon, Chestnut, Ventura-  
Kings Canyon.
-  Phase 3 – 2006/2007      Fiber Optic Loop Installed,  
Technology Deployed &  
System Operational.  
(168 count fiber trunk line with 6 strands at each intersection)

# Intelligent Transportation Systems

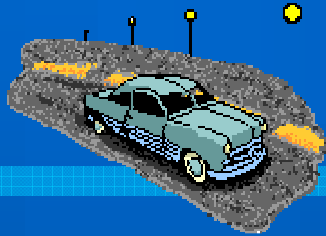
## Operations & Maintenance – Today!



- |   |                                    |
|---|------------------------------------|
|  ITS Program               | Funded (~\$900k for O&M)           |
|  Operations & Maintenance  | Staffed with 8 Dedicated ITS Staff |
|  ITS Standards            | Published (Feb 2008)               |
|  ITS Strategic Plan      | Published (Jan 2009)               |
|  ITS Wireless Standards  | Published (Oct 2009)               |
|  Traffic Synchronization | Underway!                          |

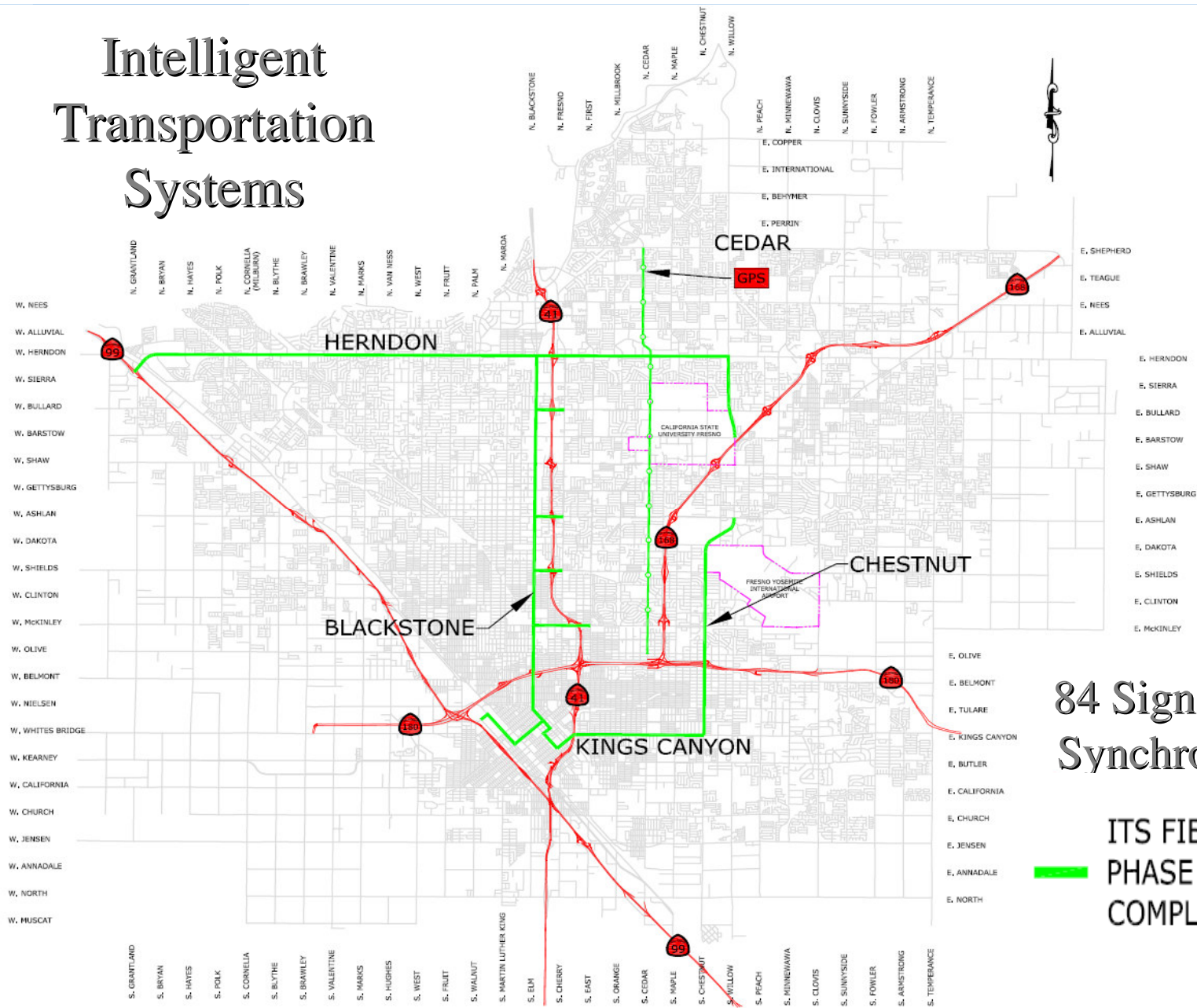
# Intelligent Transportation Systems

## Traffic Synchronization – Today!



- ✓ Herndon Ave      Synchronized Willow to Golden State
- ✓ Blackstone Ave      Synchronized Olive to Herndon
- ✓ Kings Canyon      Synchronized Downtown to Chestnut
- ✓ Chestnut Ave      Synchronized Kings Canyon to Shields
- ✓ Cedar Ave      Synchronized Olive to Shepherd
- Herndon Ave      Re-Synchronize Herndon from  
Willow to Golden State is Next!

# Intelligent Transportation Systems



# Intelligent Transportation Systems

ITS Fiber Projects - 2009 to 2012!



Shaw Ave (East)

ITS Project is being designed from Highway 41 to Highway 168 (\$3.1 mil)



Shaw Ave (West)

ITS Project is being designed from Blackstone to SR99 (\$4.2 mil)



Clovis Ave

ITS Project is being designed from Dakota to American (\$3.1 mil)



Willow Ave

ITS Project is being designed from Ashlan to Shepherd (\$1.4 mil)



Fresno Street

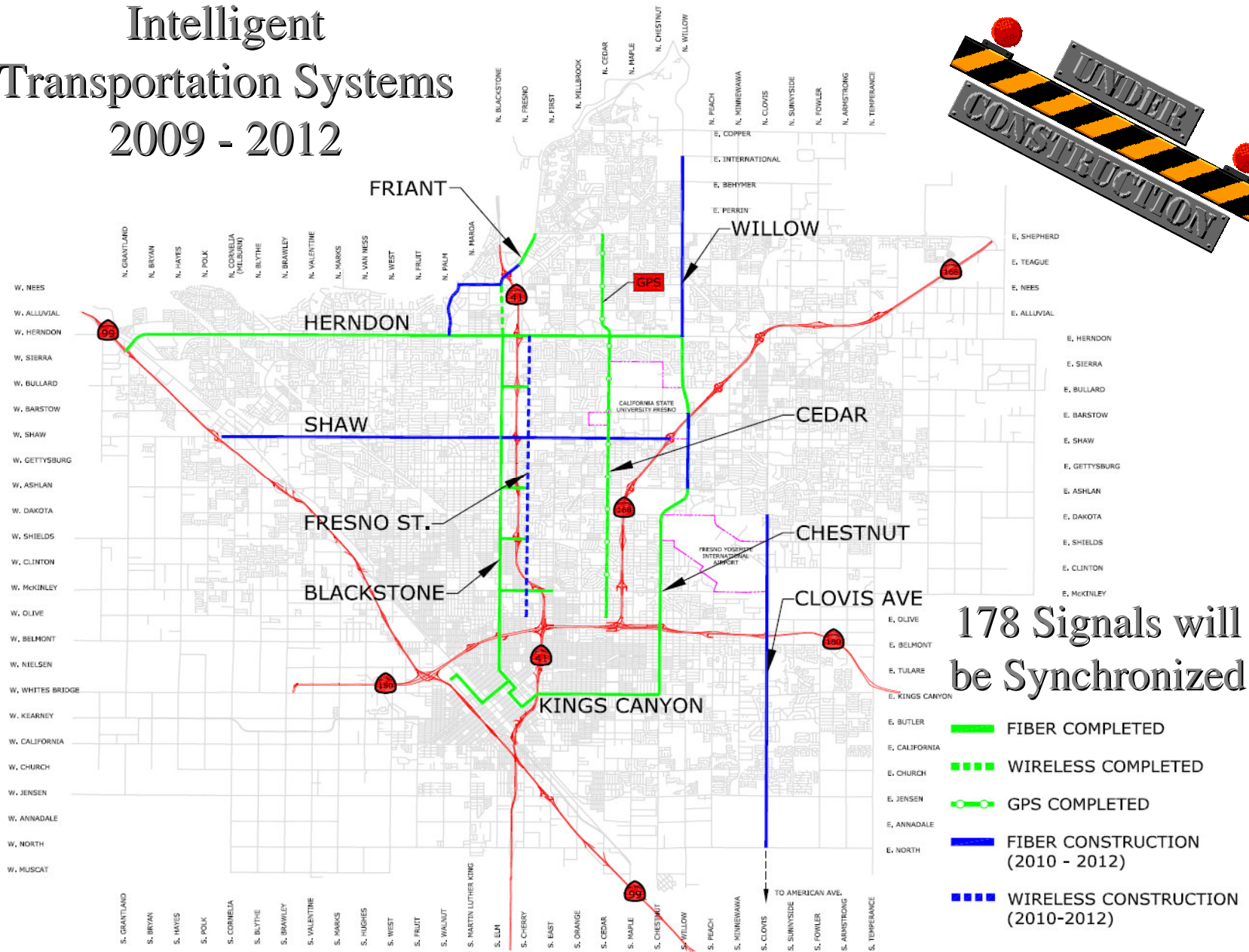
ITS Wireless Project is awarded from Olive to Herndon (\$0.22 mil)



Palm-Nees-Friant

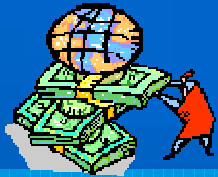
ITS Project is awarded from Herndon & Palm-Nees-Friant to Shepherd (\$1 mil)

# Intelligent Transportation Systems 2009 - 2012



# Intelligent Transportation Systems

ITS Wireless Projects - 2013 to 2014!



## Air Quality Grants Awarded for Wireless!



First Street

Nees to Ventura (\$1.5 mil)



West Ave

Herndon to McKinley (\$480 k)



Nees Ave

Palm to Willow (\$450 k)



Bullard Ave

Marks to Willow (\$790 k)



Ashlan Ave

Blackstone to Peach (\$650 k)



Shields

West to Chestnut (\$1 mil)



McKinley Ave

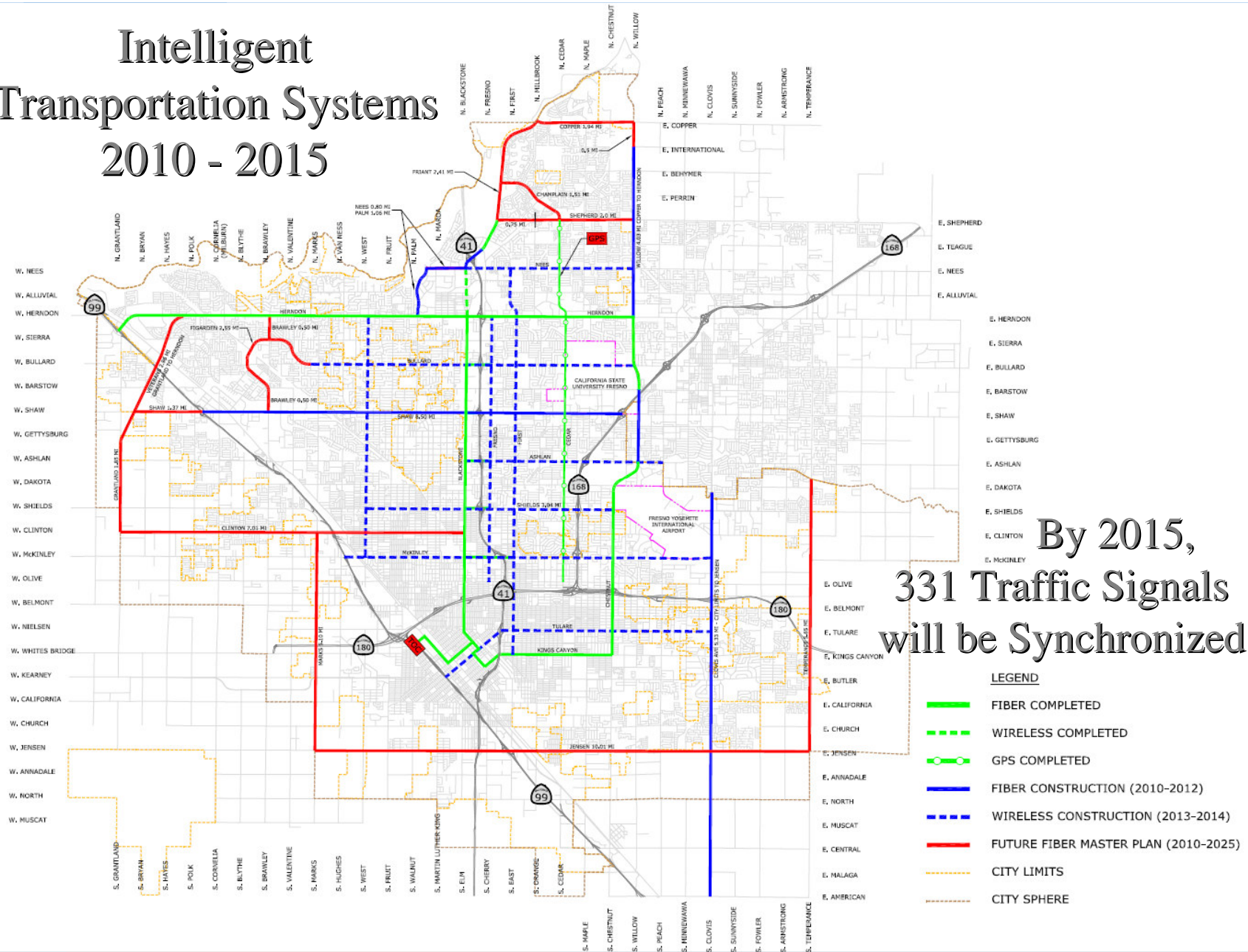
State Route 99 to Clovis Ave (\$850 k)



Tulare Ave

Downtown C Street to Clovis Ave (\$750 k)

# Intelligent Transportation Systems 2010 - 2015



By 2015,  
331 Traffic Signals  
will be Synchronized

# Intelligent Transportation Systems

## The City's ITS Program – Future!



ITS Operations & Maintenance Program is staffed.



ITS Capital Program future is very positive with



\$23.2 million from development impact fees  
as the City's General Plan is built out.



\$19.5 million from Air Quality and Traffic Light  
Synchronization Grants (2010-2014).



What is next?

# Intelligent Transportation Systems

The City's ITS Program – Future!



## ITS Program's Mission!



The Fiber Network Backbone will soon be completed, synchronizing 158 Traffic Signals.



The Wireless Interconnect will build 9 corridors, synchronizing 173 additional Traffic Signals.



ITS Program is now seeking Air Quality Grants for the City's remaining 169 Traffic Signals.








# Intelligent Transportation Systems Program – Benefits!

## Emissions Reductions - Blackstone and Herndon

 Carbon (CO)	300 Metric Tons
 Nitrogen Oxides (NOx)	60 Metric Tons
 Volatile Organic Compounds (VOC)	75 Metric Tons

## Quality of Life

-  Travel time reductions are up to 18%
-  Herndon Synchro model shows 1.5 million gallons of fuel savings annually
-  Blackstone Synchro model shows 0.85 million gallons of fuel savings annually

# Intelligent Transportation Systems

## Questions?

